



10-1966

# Bulletin of the Massachusetts Archaeological Society, Vol. 28, No. 1

Massachusetts Archaeological Society

Follow this and additional works at: <http://vc.bridgew.edu/bmas>

 Part of the [Archaeological Anthropology Commons](#)

---

## Copyright

© 1966 Massachusetts Archaeological Society

This item is available as part of Virtual Commons, the open-access institutional repository of Bridgewater State University, Bridgewater, Massachusetts.

# BULLETIN OF THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY

VOL. 28

NO. 1

OCTOBER, 1966



## CONTENTS

	Page
NOTABLE UPPER CAPE COD SURFACE RECOVERIES WILLIAM S. FOWLER .....	1
OBSERVATIONS ON EASTERN ALGONKIAN LINGUISTICS LINGUISTICS NICHOLAS N. SMITH .....	4
A BUNGAY RIVER SITE GEORGE H. BARTON .....	9
A PROBABLE FAKE PRE-COLUMBIAN MARKER BERNARD W. POWELL .....	10
PEBBLE-MADE PROJECTILE POINTS RICHARD Q. BOURN, JR. ....	14
CACHE OF ENGRAVED PEBBLES FROM NEW BRUNSWICK WILLIAM S. FOWLER .....	15
IN MEMORIAM .....	15
REDETERMINATION OF THE HALF-LIFE OF CARBON 14 WILLIAM B. BRIERLY .....	Back Cover

PUBLISHED BY THE  
MASSACHUSETTS ARCHAEOLOGICAL SOCIETY, INC.  
SOCIETY OFFICE, Bronson Museum, 8 No. Main Street, Attleboro, Mass.



## MASSACHUSETTS ARCHAEOLOGICAL SOCIETY

### OFFICERS

#### *President*

Harold F. Nye.....Converse Road, Marion, Mass.

#### *First Vice President*

Donald C. Wilder.....86 Brewster Avenue, South Braintree 85, Mass.

#### *Second Vice President*

William B. Brierly.....9 Hawthorne Street, Millbury, Mass.

#### *Secretary*

Maurice Robbins.....Bronson Museum, Attleboro, Mass.

#### *Financial Secretary*

Mabel A. Robbins.....23 Steere Street, Attleboro, Mass.

#### *Treasurer*

Arthur C. Staples.....Segreganset, Mass.

#### *Editor*

William S. Fowler.....Bronson Museum, Attleboro, Mass.

#### *Trustees*

#### *Society Officers and Immediate Past Presidents:*

Arthur C. Lord and Vigo C. Petersen

Edward G. Bielski

Robert A. Martin

Norma G. Wentworth

Robert E. Valyou

George S. Gibb

Frank Kremp

MASSACHUSETTS ARCHAEOLOGICAL SOCIETY BULLETIN, published in four Numbers of one Volume each year, commencing in October.

Price this issue \$.75

(Subscription by membership in the Society: \$3.00)

*Note: Address all requests concerning membership to the Secretary; all orders for back Bulletin numbers (4 for \$1.00 to members) to the Editor; and mail Society dues to the Financial Secretary.*

### BRONSON MUSEUM

Tel. 222-5470

This is the Society's museum, 5th Floor of the 8 North Main Street Building, Attleboro, Mass. —Museum hours are from 9:30 to 4:30, Mondays, Tuesdays, and Thursdays. For special arrangements to visit on other days, contact the Director, Maurice Robbins, or the Curator, William S. Fowler at the Society Office, Bronson Museum, Attleboro, Mass.

The Museum includes exhibits of artifacts and seven dioramas portraying man's prehistoric occupation of New England. The displays are arranged so as to show man's development through four culture stages, from early post glacial times.

The most recent diorama extends 15 feet across the front of the museum. It depicts an Archaic village of seven large and unique wigwams as indicated by their foundations, excavated at Assowampsett Lake by the Cohannet Chapter. Human figures to scale make the scene come alive and help create what unquestionably is an outstanding addition to our ever growing museum displays.



## NOTABLE UPPER CAPE COD SURFACE RECOVERIES

1

WILLIAM S. FOWLER

The Bronson Museum has just become the recipient of many valuable artifacts, generously donated by a Society member, George Gibb of Attleboro. The collection represents, for the most part, surface finds made in the vicinity of Falmouth, many coming from an area between Waquoit and Cotuit. The sites were located in plowed fields on high ground, at places between tidal estuaries, as Gibb relates, for these areas were under extensive cultivation at the turn of the century, when the recoveries were being made. As a matter of fact, it was during the late 1800's that Dr. Lombard C. Jones of Waquoit commenced his gathering of stone artifacts, which, over the years, grew into a sizable collection.

Dr. Jones, a well-known itinerant general practitioner on the Cape, was a graduate of Harvard University in 1888. Due to a close family relationship with the doctor, George Gibb spent many happy hours driving about with him, while he made his round of sick calls. At such times, the doctor would point out sites, which had been especially prolific in the early days of his hunting. In the end, Dr. Jones gave his collection to Gibb, which in turn has now been made available to the Bronson Museum. At the start, Dr. Jones served as a sort of field agent for the Peabody Museum at Harvard, to whom he gave some of his recoveries. In those days, collectors were scarce and most sites had not been plundered. This situation made it possible for the doctor to retrieve many large and beautiful specimens, some of which are illustrated (Fig. 1). While the Waquoit-Cotuit side of the Cape produced most of his finds, a few came from the Sandwich-Spring-Hill area of East Sandwich. Most of his best sites appear to have been plowed fields lying adjacent to salt rivers. Also, he plucked many an artifact from washed banks along tidal estuaries, and sometimes hunted the beaches. Gibb remembers one walk he had with the doctor along the banks of the Moodicus or Quashnet River in the Cotuit area, when he picked up a large chipped blade among the rocks on the shore.

With this as a background, brief comments about those specimens as illustrated may have more meaning. The artifacts have been carefully drawn and shaded by various pen-and-ink techniques in order to portray the wide range of surface effects, both as to graining of the stone materials, as well as to depth of their colorations. In general, it is of interest to observe that these Upper Cape artifact types correspond to those of the mainland, which suggests culture and racial similarity.

Exhibit #2 is a Paint Cup with a hardened caked-incrusted lining of brilliant red ochre. It represents utilization of a geode, in which the interior came loose to leave a deep cup-like receptacle. The entire edge of the cracked-open pebble has been carefully rounded by man-worked abrasion to form a much prized container for mixing red paint. Exhibit #1 is a polished pebble. Either it or one like it could well have been the pestle used in preparing the paint.

Exhibit #4 is, perhaps, the most outstanding and unusual artifact in the entire collection. Obviously, it represents a human effigy that lacks full development of arms and legs. Also, it lacks a well-developed breast, which seems significant. This suggests that it might have been intended for a doll, and, if so, shows child affection by some female potter, for it is a ceramic product. Actually, it was made by appliqué, a fact which seems to be an important discovery. A slight flaking off of the outside ceramic coating may be seen at its lower right-hand corner. What seems to have taken place in its construction was as follows: First, using clay with medium mineral temper, the figure was carefully shaped. Next, it was well fired, during which, its color changed to a deep terra-cotta shade. Finally, a thin layer of clay without mineral temper was applied evenly over the entire figure. The effigy was then fired once more, but only enough to effect a moderate hardening of the clay — not enough to change its color, which retained its original gray shade. How many more objects were made in the same way is not known, but it is safe to surmise that this doll effigy was not the only product of its kind. Rather, it may serve to suggest a more extensive use of the technique by appliqué during the Ceramic Age.

Exhibits #5,6 represent some eight or more specimens found in the assemblage. They fulfill type qualifications of a War Club Prong. Made of durable stones they are worked to a stubby prong at one end, which tends to produce a more or less triangular shape. The base is casually worked, and is often left in a rather rough, thick condition, depending upon the original thickness of the stone stock from which the implement was made.

Exhibit #3 is an exceptionally fine specimen of the Eared drill, with its ears noticeably accentuated. Made of dark gray porphyry, it has a relatively small bit, which may have been used for perforating such small holes as are found in some pendants.

Exhibits #7-17 display 8 different projectile point types of the Northeast, in which the artifact in each



case is expertly fashioned with much retouching in evidence. Perhaps, of all these specimens, attention should be called to Exhibit #14, since it has exceptional refinement. Representing a Corner-removed #1 spear point, it is made from a  $\frac{3}{8}$ " thin piece of gray felsite, which holds remarkably to this thinness throughout. Retouching is as uniformly perfect as can be expected from eye-controlled chipping, and the wide blade, as seen in this type, is an important diagnostic of the Late Archaic Stone Bowl industrial age. So also are Exhibits #8,12,15-17.

Exhibit #18 is a well-made polished Adz, with the back of its poll deeply grooved to receive the hafting thongs. This specimen was pecked into shape, then polished all over with attention paid to formation of a prominent shoulder, terminating the groove. Apparently, it is made of hard sandstone, and reveals an implement type not often found on coastal sites of central coastal New England, where, instead, several different Gouge types usually appear. However, the Adz, similar to the exhibit, has frequently occurred on sites in the Connecticut River Valley, where the Gouge is scarce. What the meaning is of such a varying incidence is not clear at this time, and will have to be left for future analysis.

Exhibits #19,20 show the well-known Celt of this area, which appears in many different sizes. Perhaps the most outstanding trait to be noticed in the case of these two specimens is the unusually small size of #20. Also, this artifact is outstanding because of the greenish-gray veined stone from which it is made. Such small wood-cutting tools as these were doubtless fastened in the end of a stick, which served as a

handle, and were utilized in this way for working wood, which on most occasions is thought to have been charred, first, to hasten the work of cutting.

Exhibit #21 is a Wing atlatl weight of the Late Archaic. It represents excellent workmanship both as to shaping as well as to polishing, and depicts a style which is not often seen. The wings of this type of artifact usually extend further out at each side, resembling more the wings of a bird or of a butterfly, as the case may be.

In the Jone's collection from the Upper Cape occurs a most unusual recovery of an Ulu, probably of slate (Fig. 2). It has been illustrated separately to emphasize a unique trait it displays, which differs from other traits usually attributed to this implement type. Although only half of the artifact was found, because of the rubbed-out elongated slot at the top, which was cut in two by the transverse fracture through the center of the blade, the missing end was conveniently reconstructed. By projecting all known edges, a reasonably accurate restoration has resulted. This enables a more comprehensive study of the implement than otherwise would have been possible from the half that was recovered.

This blade reveals several traits, which indicate beyond a possible doubt the method used in its hafting. A section of bone, or a stick with about a  $1\frac{1}{2}$ " diameter, 8" in length was split in two, after deep notches had been cut out on one side at three different places. The spacing of these notches corresponded to the distance between the central hole in the top and the two corner notches at either end of the cutting blade. The split handle was then lashed firmly to the

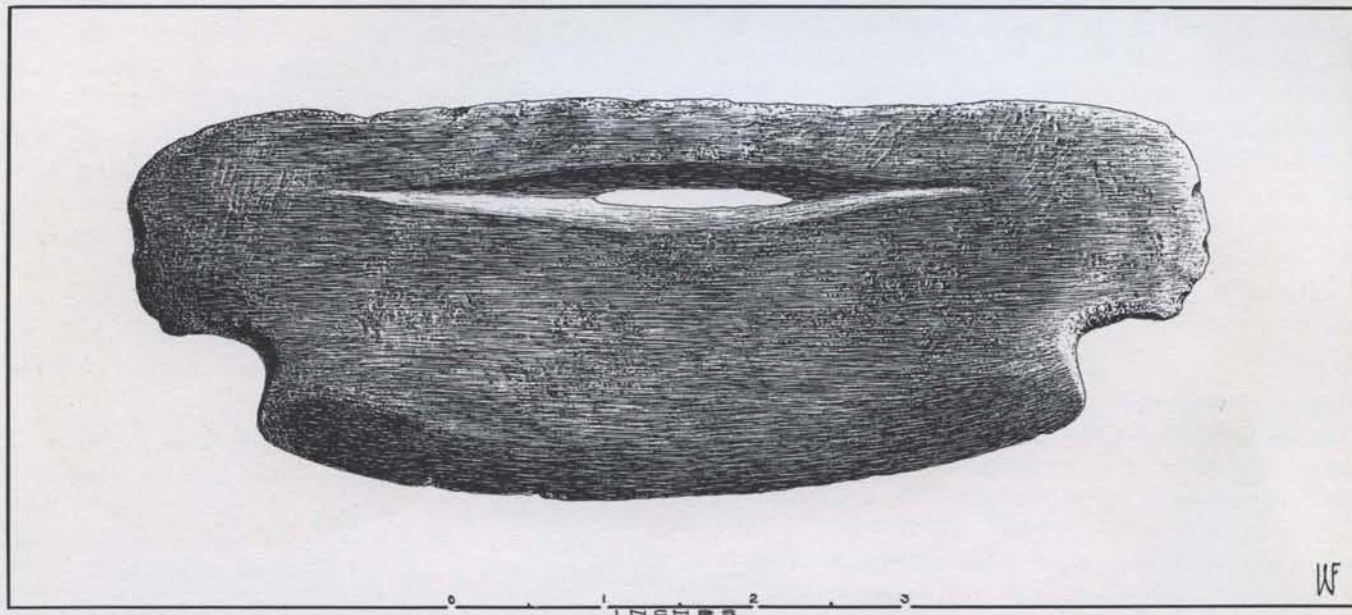


Fig. 2. ULU (Restored) — Upper Cape Cod Surface Recovery.



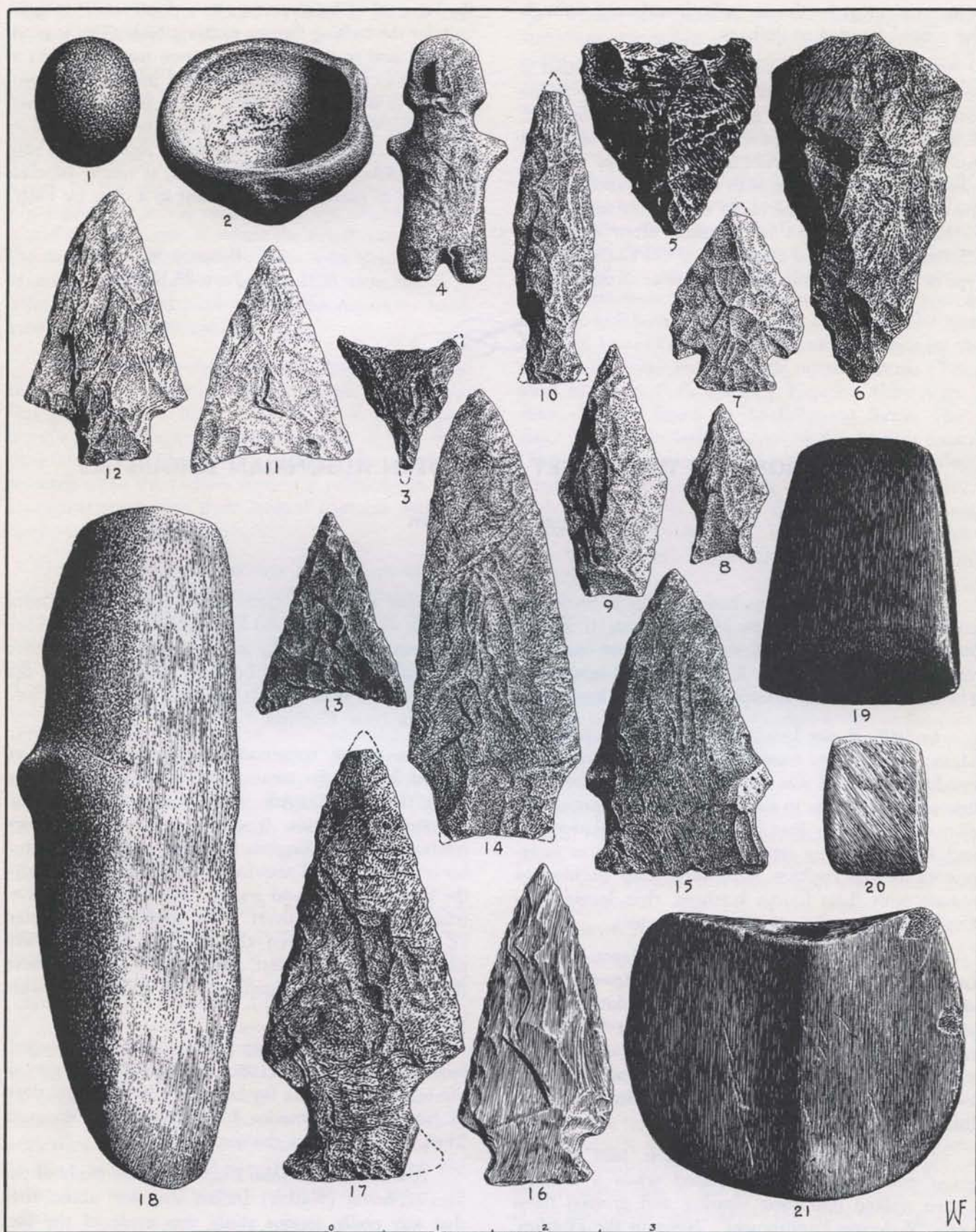


Fig. 1. UPPER CAPE COD SURFACE RECOVERIES. 1, 2, Paint Cup and Pestle; 3, Eared Drill; 4, Doll Effigy; 5, 6, War Club Prong; 7, Corner-notched; 8, Eared; 9, Tapered Stem; 10, Side-notched; 11, 13, Large Triangular; 12, Corner-removed; 14, Corner-removed; 15-17, Side-notched; 18, Adz; 19, 20, Celt; 21, Wing Atlatl Weight.



stone implement by thongs at both ends and through the central incision in its back.

This tool equates with the classic Ulu, in that it has a straight back with a convex cutting blade extending away from it, ground to a relatively thin, sharp edge. Also, the perforation through its back, not drilled, was made by rubbing the edge of a stone continuously in a line on both sides at locations opposite each other, until the blade was cut through. This method of perforation by abrasion often occurs in Ulus and is considered diagnostic of this Early Archaic type of knife. The trait that appears as an anomaly is

the removal of basal corners to a depth of  $\frac{1}{2}$ " to provide for the hafting thongs, as described. This is most unusual and is seldom, if ever seen; may represent a variation as a result of independent invention. However, it is worth noting here, in the event that other specimens similarly shaped may now be recognized in other collections. Should reasonable repetition of this corner-notched trait be discovered, it might become desirable to place this Ulu variant in a class by itself.

Bronson Museum,  
June 22, 1965



## OBSERVATIONS ON THE HISTORY OF EASTERN ALGONKIAN LINGUISTICS

NICHOLAS N. SMITH

Europeans have always had difficulty in becoming proficient in Indian languages. Indians, it seems, learned English or French with much more ease and rapidity than white men learned Indian languages. The Indians were the interpreters from the beginning.

In 1605, Rosier kidnapped five Indians from the Maine coast. They were taken to England and were taught English. It was intended that they were to be interpreters but due to unfortunate circumstances, not all were returned. Two years later, when Skidowares and Tahanedo were returned to their home as interpreters for the Popham Expedition, they decided to remain with their Indian brethren, thus leaving the English without their desired interpreters.

Most of the early explorers and adventurers did not have the advantage of interpreters. However, they usually made an attempt to find out the native names of the places visited and perhaps even a few of the native words. Such place-names often became veiled in mystery, like the idyllic Norumbega, the exact location of which has never been definitely established.

One day in the middle of March, 1621, the Pilgrims must have been astonished when a swarthy native walked into their clearing and greeted them with, "Welcome Englishmen!" News of the Pilgrims' arrival at Plymouth had reached Samoset whose home was in Pemaquid, Maine. His sudden appearance on

the scene poses two questions: How did he learn English — and, Why did he travel to such a distance to extend greetings to the new arrivals? He must have been able to distinguish between the French and the English since both nations had sent parties to explore northern New England.

The native communication system must have alerted Indians for some distance up and down the coast that the English were planning to settle at Plymouth. Samoset, it appears, had an excellent relationship with English fishermen who had visited his coast for he had acquired a fair acquaintance with the foreign tongue and was an unusually cooperative, trusting Indian extrovert. For some time he acted as interpreter between the English and the Wampanoag Chief, Massasoit, which leads one to believe that his Algonkian language and Massasoit's were quite similar.

In 1625 Samoset's understanding of the English language and his cooperation with the English way of life is apparent again, for he makes the first land deed in Northeastern America for a parcel in Pemaquid. Then he drops from the scene.

It was not until John Eliot began his study of the Massachusetts (Natick) Indian language about 1640 that any really serious study was made of the language. Although his work was severely criticized by Cotton Mather, Eliot stuck to it and his work later



became the basis for James Trumbull's *Natick Dictionary* published in 1903.

About 60 years after Eliot began his studies Father Sebastian Rasles, the second person to make a substantial study of a New England Indian language, began keeping his meticulous notes of the Abnakis' tongue. For 25 years he worked over his notes, but he was never to see the completion of his French-Abnaki Dictionary, for it was captured by the English during a raid on Norridgewolk where the priest ministered to the natives. The dictionary notes were placed in the Harvard College Library, and in 1832 were edited by John Pickering and published by the American Academy of Arts and Sciences.

Roger Williams made a useful, but not as extensive, study of the Narragansett language, one that was first published in 1643. The work of these three clergymen-philologists completed an era in New England linguistics. There was no other serious linguistic research while the Indians were still primarily in their aboriginal state with their limited contacts with the European civilization.

It could not have been easy for these pioneers in Indian linguistics. Their ingenuity and patience must have been extreme in order to obtain Indian equivalents for such words as "firmament," "Trinity," "incarnation," "redemption," or "salvation." In his article about John Eliot, Francis Russell catches the difficulty and trying atmosphere of the linguist: "... It was a tremendous effort to adapt the restricted Indian tongue to the subtle and majestic cadences of the King James Version. For so many things, there were no equivalents. Job Nesutan often did not know. And some Indians with childish malice would deliberately trick him, supplying a wrong or sometimes an obscene word."<sup>1</sup>

A good many white people had this kind of trick played on them, and even in current times it has been done. A few years ago a gentleman visited the Penobscot Reservation in Old Town, Maine, and after talking with several Indians a few minutes stated that he was going to build a restaurant and that he wanted an Indian name for it. The Indian name given to him was anything but complimentary for a restaurant, yet the gentleman was proud that he had an authentic Indian name for his establishment. In part, the Penobscot's reasoning was that while the Indian is a ward of the state, here was a man who planned to exploit the Indian by using a Penobscot word to help make his fortune.

While many missionaries, map-makers, explorers, surveyors, woodsmen and adventurers made incidental notes of Indian words, there was little extensive or serious study of the languages for some time. Usually, such word lists were composed of what was common or basic to European experience, such as the names of the days of the week, numbers, or place-names. It seems that the New England tribes originally had a thirteen month lunar year, but no names for the days, nor did they even have weekly divisions. Time and punctuality did not have the significance for the Indian that it did for the European. Soon after the arrival of the missionaries, Indians learned the importance of Sunday, holidays, and the weekly divisions. The New England Indians must have learned the names for the days of the week from a single mission source (Peter Paul, Malecite; F. G. Speck; J. Laurent; Abby Alger), since they are based on the following forms: "Sunday," Sun-te (an Indianization of the English form); "Monday," Giz-sun-te "after Sunday"; "Tuesday," Niz-lo-kan "second working day"; "Wednesday," Ni-ho-lo-kan "third working day"; "Thursday," Ne-o-lo-kan "fourth working day"; "Friday," Ske-he-wa-tukq "day of the cross"; "Saturday," Kud-u-wa-sunt-te "almost Sunday."

Counting was based on fives or sets of hands, a quinary system. To the Indian, "many" could be used to distinguish any amount over five. This may seem like a lazy way of thinking but an Indian did not have to think in terms of a large European city, in the commercial terms of a large cargo ship, or in the feeding of many people.

For some years the Indians were living in two worlds: that of their ancestors and that of the Europeans. Vetromile catches some of their confusion: "They now reckon two mornings, which they call Wenotch-spanswi, morning of the whites, and Alanbay-spanswi, morning of the Indians."<sup>1</sup>

Place-names present special problems. There are a number of publications concerned with New England Indian place-names, and they often present quite different translations, all by experts, for the same name. Generally, Indian words of several syllables are made up of single syllables of several words. Place-names follow this rule. Eckstorm gives, "Matawamk'-eag, 'at the mouth of the bar' . . . Matawamkeag, as pictured by the Indian, was a point of gravel on the upper side of the entrance, where the current of the main river had crowded the wash of the smaller

1. RUSSELL, FRANCIS. "Apostle to the Indians," A Treasury of American Heritage, Simon & Schuster, 1960, p. 71.

1. VETROMILE, EUGENE, *The Abnakis and their History*. Kirker, 1866, p. 84.



entering streams into a pointed bed of gravel."<sup>1</sup> In contrast, Masta says, "Mattawamkeag from Mattawamkiag means the Indians of the farthest or last settlement."<sup>2</sup>

In this example, both of the informants must have had quite a different kind of personal knowledge of the site. Each tried to interpret the name from his personal knowledge. Fannie Eckstorm had canoed the Penobscot many times with her father and Indians. She says, "'amkeag' is found often in Malecite words for a gravel bar or sand beach." "Mattaw comes from the word 'madaweik' meaning 'mouth of a stream'."<sup>3</sup> Geologic features such as gravel bars were important to Indians. Distance was customarily calculated in the number of gravel bars up or down the river. Places along the river were recognized by their distinctive gravel bar such as this one, which can easily be seen except in the spring when the water is high. Masta divided the word into "Matta" meaning "the farthest or last, . . . 'wan' for wigwam or settlement, 'ki' means land, final 'ak' means the inhabitants of the land."<sup>4</sup> It was probably common knowledge to Masta, a St. Francis Abnaki, that it was said that Mattawamkeag was the most northern Penobscot settlement, since St. Francis Indians often roamed Penobscot territory. He most likely was not aware of the distinguishing geologic feature, but attempted rather to fit the word to the characteristic which was most familiar to him. From his personal knowledge of the river, this was a plausible translation no doubt.

In the 1800's a new trend developed. The Indians, who must have realized the feeble attempts made by the white men to learn the Indian languages and compile dictionaries of them, began to publish dictionaries and grammars of their own. Those interested in the study of Indian languages must rely on such books, written by Indians, for source material. In 1760, Jean Baptiste Nudenans compiled *A Garden of Abnaki Roots*, which has never been published. Recently Peter Paul, a Malecite, said that Nudenans means "the helper," so it is probable that he was an assistant to the priest, and that it was the priest who encouraged him to compile the word list. In 1830, Peter Paul Wzokjilain, a Dartmouth alumnus who returned to Old Town, Maine, to teach in the Indian

School there, wrote an *Abnaki Spelling Book*, which was printed in Boston. In 1851 Nicola Tenelas wrote a 24 page pamphlet entitled *The Indian of New England and the North-eastern Provinces*, which contained a vocabulary of about 300 words. In 1883, Peter John Gabriel, a Micmac, wrote *Amweswintowagen*, (*Song of the Bees*), a short verse that was printed in Eastport, Maine, and was sold at a church fair.

These were followed by longer, more comprehensive works. In 1884, Joseph Laurent's *New Familiar Abenakis and English Dialogues* appeared. It stressed phrases and sentences common to the white man's way of life. In 1893, Joseph Nicolar, who had been writing a column for an Old Town paper, wrote *The Life and Traditions of the Red Man* — often referred to as *The Indian's Bible* by the Penobscots. It contains an excellent list of Penobscot place-names. In 1932, Henry Masta's *Abenaki Indian Legends, Grammar and Place Names*, the last work in book form concerning a New England Indian language was published.

During this era only one non-Indian wrote a work of real consequence concerning an Eastern Algonkian language. Silas Tertius Rand was born in Nova Scotia in 1819. While he was a young boy, it was decided that he would be a minister, and he was sent to the Baptist seminary at Wolfville, where he enjoyed Latin. A short time later, his formal schooling was interrupted, but he was able to return to school in the evenings, and he then studied Greek. Later he learned Hebrew. In 1846 he became the first Protestant missionary to go to a Micmac reservation, and for the rest of his life he was closely associated with Indians. In 1888, his 40,000 word *Dictionary of the Language of the Micmac Indians* was published. This book is still recognized as the definitive work on the Micmac language.

About 1890, Edwin Tappan Adney began making notes on the Eastern Algonkian languages. After a few years his work was interrupted. He was able to return to it after a lapse of 25 years, and he continued his study until his death in 1950. A few of his articles have been published but the bulk of his work has not been printed. Fannie Hardy Eckstorm's contribution was her fine compilation of *Indian Place-Names of the Maine Coast*, published by the University of Maine in 1941. Joseph Laurent's son, Stephen, has retained much of his father's interest in Abnaki and has written several articles about his native language including *New Hampshire's First Language*, which appeared in *New Hampshire Profiles*, March, 1958, and *The Abenakis: Aborigines of Vermont*, which appeared in two parts, the first in October 1955 and the second in

1. ECKSTORM, FANNIE HARDY, *Indian Place-names of the Penobscot Valley and the Maine coast*. Univ. of Maine, Orono, Me., 1941, p. 58.
2. MASTA, HENRY LORNE, *Abenaki Indian Legends, Grammar, and Place Names*. *La Voix des Bois-Francs*, Victoriaville, P.Q., 1932, p. 88.
3. *IBID.* p. 59.
4. MASTA. p. 88.



January 1956, issue of *Vermont History*. Since 1950 at least, a half dozen linguists have collected material, but Gordon M. Day's "A St. Francis Abenaki Vocabulary" in the October, 1964 *International Journal of American Linguistics*, is the only word list that has been published. In 1959 this author received a grant from The American Philosophical Society to prepare a paper and tape entitled *Malecite Words pertaining to Natural History*, but it has not been published. This scarcity of linguistic material often leaves the archaeologist, who feels the translation of a given Indian place-name might be significant, in a quandary.

Due to the lack of scholarship in the area of Eastern Algonkian linguistics no systematic classification of languages, dialects and subdialects has been made. Micmac, Malecite, Passamaquoddy, and St. Francis are quite similar, and as Samoset was able to converse so well with Massasoit, it seems that other neighboring languages were also closely related.

Usually, Wabanaki words in the dictionaries and word lists have been rendered into good, acceptable English translations, but they could also be given literal translations that would come closer to indicating the true meaning, but at the risk of being clumsy English. "Verbs play an important part in Algonkian languages. Even nouns can be said to be verb-like, unlike the case in English where nouns are quite distinct from verbs," (SORENSEN, A.). Nouns are formed from verbs that describe the motion or action of the object. When a white man pointed to a canoe and asked for the Indian name, the reply was "u-gwid-un," which literally simply means "it floats," a basic description of the principal characteristic of a canoe. (The basic meaning of "floating" might cause ambiguity if one were not certain of the context.)

In English, we usually think of the nouns as the "strong" words around which the rest of the sentence is built. It seems to us then, that in the Eastern Algonkian languages these names may be arbitrarily cut up, or added to before or after, or have one or more syllables from one or more words (not necessarily nouns), inserted — and that all such cases must then represent new words. Complicating the principles of word-compounding are syllables or suffixes that are inserted or added to indicate type of material in question, that the object or person is from old or ancient heritage, and that all objects require an inanimate or animate ending. For an English speaker learning an Algonkian language, a knowledge of "what to do when" in deriving forms can only come after much experience — when one has a real "feeling of the language" and knows, almost instinctively, when "it just sounds right that way." "White people

who have had years of formal, normal English training in schools are bewildered by Algonkian forms, and lack the feeling for what is correct that the Indians — almost 'mystically' — have," (IBID.).

Another source of confusion, in translating an Eastern Algonkian language, is the pronominal prefix, which is prefixed to the noun. At times it might be impossible to find a pronominal prefix for a noun that cannot stand alone so an indeterminate or impersonal prefix is added; that is translated as "a," "an" or "the" in English. This prefix is especially common when referring to the parts of the body. No Indian would think of saying just, "si-sukq" (face). While it is proper to say merely "face" in English, if no personal pronominal prefix could be used in Eastern Algonkian, it would have to be M'si-sukq."

That which corresponds to adjectives in English is found as either a prefix or a suffix to the noun in Eastern Algonkian languages. Certain such adjectives always appear as prefixes while others always appear as suffixes; still others may appear in either position. K'chi- meaning "large" or "great" always appears prefixally, but -'sis meaning "little" or "small" always appears suffixally. The terms for good, bad, and colors appear prefixally.

The physical characteristics of an object are also noted by a suffix. Thus an Indian would know by the otherwise ambiguous term "it" if the object referred to is a liquid or a solid, and if a solid, whether it were flexible like a leather thong or strong like a stick, and if it were animate or inanimate.

Sometimes the Indians have more than one name for an object which in English has only one name. Often confusion has resulted when one informant has used one name while another informant has used a different name for the same thing. An analysis of these two words often shows that both words are good forms so that both informants were correct. For instance, the Abnaki and Penobscot use "tmakwa" ("cuts wood") for "beaver" whereas the Malecite and Passamaquoddy customarily use "kwabit" ("ugly teeth"); but a Malecite gave Edward Jack "Ke-taaag-anaoloss"<sup>1</sup> ("rough tailed one") for "beaver." Peter Paul, a Malecite, who translated these words said that they were all good forms in his language.

Although Kiohus is the usual Malecite term for "muskrat," all Wabanaki understand the Abnaki "musquash," which is the common form found as a place-name in New England and Eastern Canada.

1. JACK, EDWARD. "Malecite Legends," *Journal American Folklore*, Vol. VIII, No. 20, 1895. p. 200.



In Eastern Algonkian some words are used only in relationship to people while others are used only with animals. In Malecite, when referring to a person's head one uses "kat-peh," but when referring to an animal's head the suffix "-tup" is substituted. This suffix is combined with the name of the animal, for example: "moz-a-tup" for the Moose's head." (However, "M'tup" is apparently a good form for a person's head in Abnaki since Laurent uses it).<sup>1</sup>

Edwin Tappan Adney once asked an Ojibway if he would have a name for an object the first time he saw it. He assured Adney that he or any Indian would make up a descriptive name so that anyone who had seen the object would have no difficulty in knowing to what he was referring.<sup>2</sup> Perhaps this is an explanation as to why the Malecite have more than one word for the same object and why one group of people prefer one form while another group customarily uses another form.

The Indian was observant and his names for

objects reflected his relationships to them. When a European pointed to a hemlock or pine, it was just a "tree;" to the Indian it was a specific variety. Therefore the Indian form appearing on many word lists for "tree" is the Indian for "white pine," "hemlock," or "maple."

The imagination of the Indian in developing his descriptive language is wonderful, and it is a pity that most Algonkian languages may be dying. Sapir says:<sup>3</sup> Examples of some such Malecite imagist poems are: snoring — "he makes a sound like crickets;" and telephoning — "he is nibbling." Language to the Indian was another creative art.

1. LAURENT, JOSEPH. "New Familiar Abnaki and English Dialogues," p. 24.
2. Adney papers.
3. SAPIR, EDWARD, *Language*, 1921, p. 228.

Plattsburgh, New York  
February, 1966

#### REFERENCES

- ADNEY, EDWIN TAPPAN. Unpublished papers, *Peabody Museum*, Salem, Massachusetts.
- DAY, GORDON M. "A St. Francis Abenaki Vocabulary," *International Journal American Linguistics*, Oct., 1964, pp. 371-392.
- ECKSTORM, FANNIE HARDY. Indian Place-names of the Penobscot Valley and the Maine Coast, *U. of Maine*, Orono, Me., 1941.
- ELIOT, JOHN. *Bible*, London, 1646.
- GABRIEL, JOHN. *Amweswintowagen*, Eastport, Me., 1883.
- JACK, EDWARD. "Malecite Legends," *Journal American Folklore*, Vol. VIII, No. 20, 1895, p. 200.
- LAURENT, JOSEPH. New Familiar Abenakis and English Dialogues, *Brousseau*, Quebec, 1884.
- LAURENT, STEPHEN. The Abenakis: Aborigines of Vermont, *Vermont History*, Oct., 1955, pp. 286-295 and Jan., 1956, pp. 3-11.
- "New Hampshire's First Language", *New Hampshire Profiles*, March, 1958, pp. 25, 41.
- MASTA, HENRY LORNE. Abenaki Indian Legends, Grammar, and Place Names, *La Voix des Bois-Francs*, Victoriaville, P.Q., 1932.
- NICOLAR, JOSEPH. The Life and Traditions of the Red Man, *Bangor*, 1893.
- NUDENUNS, JEAN BAPTISTE, A Garden of Abnaki Roots, unpublished, 1760.
- PAUL, PETER L., Malecite informant supplying material to author.
- RAND, SILAS TERTIUS. Dictionary of the Language of the Micmac, *Nova Scotia*, 1888.
- RASLES, SEBASTIAN. A Dictionary of the Abnaki Language in North America, *Memoirs of the American Academy of Arts and Sciences, New Series*. Vol. I. Cambridge, Mass., 1833.
- RUSSELL, FRANCIS. "Apostle to the Indians," *A Treasury of American Heritage*, Simon & Schuster, 1960, p. 71.
- SAPIR, EDWARD. *Language*, *Harcourt*, 1921.
- SMITH, NICHOLAS N. Malecite Words Pertaining to Natural History, Unpublished manuscript, *American Philosophical Society*, 1959.
- SORENSEN, ARTHUR. Correspondence, 1966.
- TENELAS, NICOLA. The Indian of New England and the Northeastern Provinces. *Middletown, Conn.*, 1851.
- TRUMBULL, JAMES HAMMOND. Natick Dictionary, *Bureau of American Ethnology*, Bull. 25, 1903.
- VETROMILE, EUGENE. The Abnakis and their History. *Kirker*, 1866.
- WILLIAMS, ROGER. Vocabulary of the Narragansett Indians, *London*, 1643.
- WZOKHILAIN, PETER PAUL. Abnaki Spelling Book, *Boston*, 1830.





## A BUNGAY RIVER SITE

9

GEORGE H. BARTON

Recent use of part of the writer's property, which borders Bungay River in Attleboro, Massachusetts, for a high powered electric line has brought to light certain interesting artifacts, which are the subject of this paper. In August of 1964 the Massachusetts Electric Company came in with their heavy land clearing machinery and leveled off part of the bluff overlooking the river. This operation preceded the laying of a transmission line through the property, and when the work was completed, about a foot of soil on the inside of the bluff down to some 5" near the high river bank had been removed. This area extends along a more or less flat plateau, which rises about 40 feet above the river. At one end of the site a spring-fed brook empties into the larger stream, which seems to have made this a desirable camping location.

In past years, superficial digging and surface hunting have recovered many stone artifacts from the area, including a beautiful Plain gouge, its hollowed-out face extending from end to end, a nicely ground Ulu, and several types of projectile points. With these facts in mind, the writer was on the lookout for other possible finds as a result of the ground disturbance

caused by the laying of the transmission line.

Soil conditions on the bluff consist of a very light layer, an inch or less in depth, of leaf mold mixed with tree roots of scrub oak. Underlying this appears yellow subsoil, which contains large cobbles scattered throughout. Artifacts have appeared in the subsoil, sometimes wedged in among the cobbles, which makes uniform excavation very difficult. Occasional attempts at excavating has revealed these adverse conditions, but in spite of them some artifacts have been recovered, including broken bases of Leaf knives of red felsite. This stone was easily procured from deposits nearby, and appears to have been a favorite choice at this site.

Subsequent to the clearing made for the transmission line a light rain occurred, and afterwards a search of the area was made for artifacts. These efforts were well rewarded, for there, fully exposed and undisturbed, lay a finely chipped double pointed Leaf knife of red felsite (Fig. 3, #1). Nearby *in situ* and presumably culturally associated with the knife appeared a Stem scraper and a Bifurcated point, both of red felsite and slightly fractured (Fig. 3, #2,3).

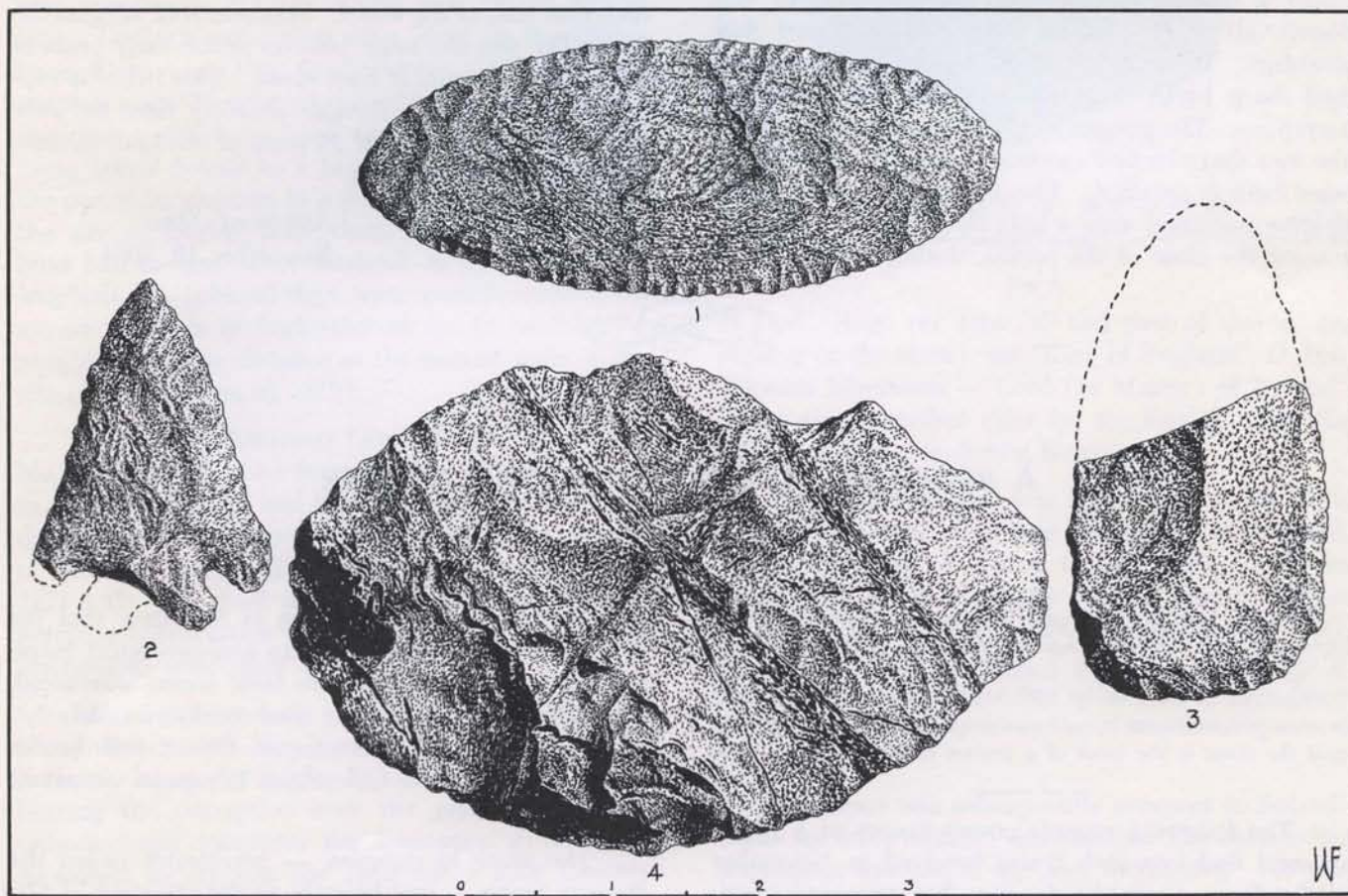


Fig. 3. ARTIFACTS FROM THE BUNGAY RIVER SITE. 1, Double Pointed Leaf Knife; 2, Bifurcated Point; 3, Stem Scraper; 4, Chopping Tool.



Sometime later, the writer's son, Arthur, selected an undisturbed spot close by the place where these finds had appeared, and started to excavate in a careful manner by scraping. He had worked down to a depth of about 7" below humus, when he came upon another large blade (Fig. 3, #4). After cleaning off the dirt, it proved to be what is known as a Chopping Tool. It is made of a gray felsite filled with fine phenocrysts, and has three quartz veins banding it obliquely. Relatively large in size, it has an oval shape and coarse bi-facial chipping. This differs from the refined reworking of Leaf knives. Because of this blade's deep position in the subsoil, it is probable that it belongs to an age antedating that of the double pointed Leaf knife.

### CONCLUSION

This rare recovery of a double pointed Leaf knife seems to warrant further comments concerning the significance of its appearance in close association with the other recovered artifacts. Upon inquiry, the writer has learned that the Bifurcated point has been found by excavation on four occasions at other sites in the area, lying in the Early Archaic zone at a low level. At the Titicut site, 2 of these points appeared, at Mill River a third, and at Nunkatusset the fourth was found; all three sites lie in the Narragansett Bay drainage. However, in all four cases the specimens had sharp barbs, which in one case had noticeable serrations. The present recovery may not be as old as the four sharp barbed specimens, since its one undamaged barb is rounded. This might represent a modification occurring after a long time span had elapsed, toward the close of the period, during which, use of

sharp barbs for harpooning water animals such as seal had become obsolete, on account of the disappearance of that kind of game.

When it comes to analysis of the double pointed Leaf knife, the writer recognizes its culture association, as reported in the Mass. Arch. Soc. Bulletin, Vol. 26, No. 1, *The Leaf Knife Complex*. In this account, this type of knife appears to be connected closely with the cremation cult of the Late Archaic, derived from evidence found at the East Head site in South Carver. Nevertheless, it might have been the early part of that age, which now seems probable because of the presence at the Bungay site of the Bifurcated point of probable late Early Archaic times.

Another piece of evidence to be taken into consideration is the last recovery of the Chopping Tool. This implement often appears in Pennsylvania closely associated with the Early Archaic of which it is held to be diagnostic. Here in New England, the writer is informed that it has recently been recovered in the Early Archaic zone at a Rhode Island site, yet to be reported. However, since there is no clear evidence of its close association at the Bungay site with the double pointed Leaf knife, it may well represent an earlier time period; its 7" depth below humus doubtless underlies that of the knife. This seems to suggest the possibility that the knife belongs to the early years of the Late Archaic as at East Head. This belief is supported by the recent Bungay recovery from the subsoil of a Small Triangular #4 point of the Late Archaic with convex lateral sides.

Attleboro, Mass.

November 16, 1964



## A PROBABLE FAKE PRE-COLUMBIAN MARKER

BERNARD W. POWELL

*A stone slab bearing incised characters, purportedly in the style of a 13th Century English land grant marker, was seen by the author on a rural wooded hillside in south central Connecticut in the Fall of 1963. Investigation of the stone, a tumulus found near it, and review of the circumstances suggest the stone is the work of a former resident.*

The following records circumstances of a rather unusual find in which I was involved in November 1963. Since a very brief notice has appeared previously in the literature (Powell, 1964), and since some

persons entertained the notion at that time that the find might be a pre-Columbian archaeological manifestation, a statement of the facts seems warranted. Certain sensationalists have used murky records relating to other "finds" (Kensington Stone; Beardsmore finds) to support pre-Columbian European visitations to North America.

The stone in question — hereinafter called the Bresson Stone — was brought to the attention of Mr. Charles Boland, then of New Canaan, Connecticut, by



Mr. Roy Bresson of Newtown, Connecticut, upon whose family property the stone was located. Supposedly the stone had been known to certain people — specifically Mr. Bresson's wife — for many years. She remembers having played near the stone as a child. However, according to Mr. Bresson, nothing had ever been done about the stone and no outside comment had ever been sought.

He was moved to inform Mr. Boland of its presence after reading material on supposed pre-Columbian voyages published previously by Mr. Boland.

Mr. Boland in turn invited me and several others, including a geologist and a representative of the local historical society, to view the stone with him. We traveled to the site and saw the stone *in situ* on November 3, 1963. It was a large slab of metamorphosed, possibly gneissic, rock not too dissimilar from the surrounding country rock. It measured 34 $\frac{1}{2}$ " long by 21 $\frac{1}{4}$ " wide at the widest part and varied from a minimum thickness of 5" near the top to a maximum at the bottom of 7" (Fig. 4). I would guess its weight near 250 lbs. As exposed about two thirds the way down a steep hillside, it lay face up in deep, apparently undisturbed leaf mould. The spot is in the uplands near map coordinates 41° 26' 15" lat. and 73° 19' 30" W. long., 1-6/10th miles west of a bend in the Housatonic River (see U.S. Geol. Survey 7.5 Series topographic map: Newton Quadrangle). For the record, the river could have been navigated upstream from Long Island Sound by a European seagoing vessel of the period in question to a point eighteen miles below the site at Derby; from there further travel would have had to have been overland, or by shallow draft longboat. In colonial days some vessels made it upstream at times of highwater as far as Southbury — roughly the same distance as the nearest point to the site (Pease, J.C., et al, 1819).

The incised characters (Fig. 4) were plainly visible, and read the same by everyone. They are carved in a medieval style, and the 1271 certainly suggests a date. The *henricus* is obviously the latinized version of "Henry." Henry III was indeed King in England in 1271 A.D. The *Angl.* was thought at the time to be a latinized abbreviation for England, but the remaining inscriptions were more obscure.

Boland subsequently contacted a medievalist, Dr. Harry Bober with the Institute of Fine Arts, New York, in hopes he might be of some help. After hearing the description over the phone, Dr. Bober unhesitatingly translated the inscription *in toto* and explained it. It was the form for a 13th Century English land grant marker, and it read: *henricus* "Henry", *D.G.* "Deus Gracius, or Through the Grace

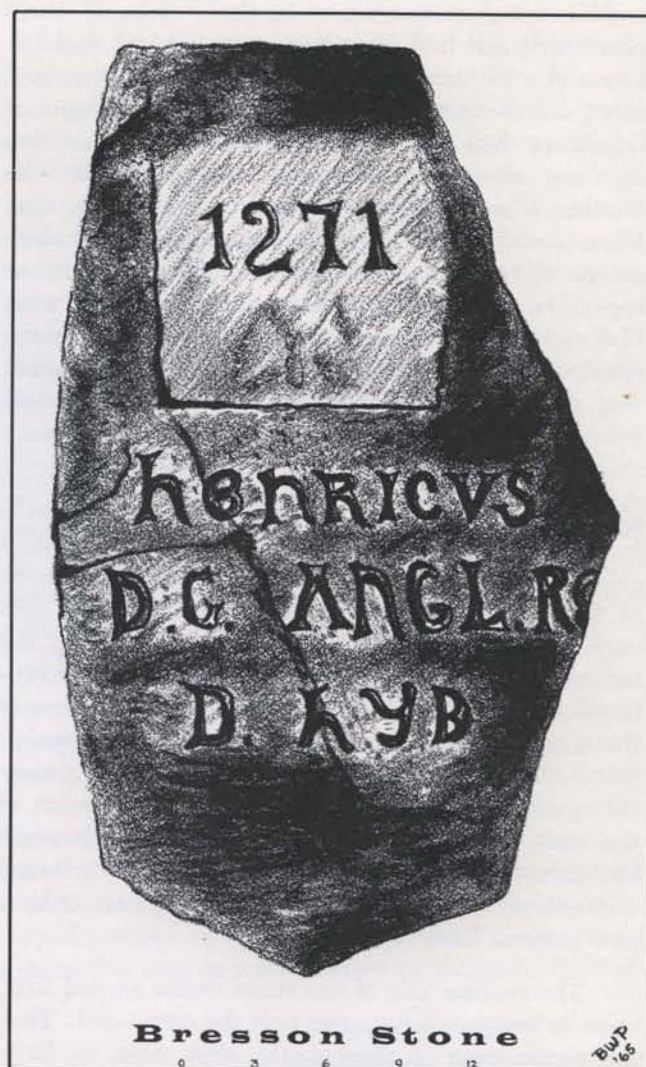


Fig. 4.

of God", *Angl. rex* (the "x" and part of the "e" are missing on the stone), see "King of England", *D. hyb.* "Domini hibernium — Lord (or Master) of Ireland". These are proscribed titles for the English King; the 1271 is a year date during Henry's reign.

Interestingly, Bober was not told where the stone was — and assumed it was somewhere in England. When informed of where it had been found, he replied that it was obviously either a genuine marker brought here in recent years, or was a fake. While this latter view is a view I share, its expression at this time was premature, for nothing had been determined of archaeological contexts or other aspects of the stone.

The stone was subsequently removed to Boland's house for more detailed examination. The outstanding impression was one of age and weathering. No part of the stone was clean or fresh looking — including, notably, the incised characters. Weathering products



and corrosion were visible in the depths of these characters, and both rounding of their edges and differential weathering of mineral grains on their surfaces, seen with a hand lens, suggested some lapse of time since their creation. Since no really comparative data on surface weathering of stones exists for the Northeast, such judgments can be rather subjective. I considered a check against the appearance of characters on tombstones of known colonial age in our region, but subsequent developments, as will be seen, obviated this. I also sought to check against the possibility of the stone being an English gneiss, but was discouraged by a mineralogist, David Seaman (personal correspondence).

Close examination showed the slab had been carved without much preliminary dressing. Tool marks in the lower edge of the date panel suggest a steel chisel with about a  $\frac{1}{2}$ -inch bit was used. The bottoms of the incised characters show faint, circular pits varying from  $\frac{1}{8}$ " to  $\frac{3}{8}$ " diameter — supporting the inference that a steel punch was used in their manufacture. Interestingly, Willard (1958) in his review of the enigmatic stone carvings at Westford, Massachusetts, cites steel punches in the kits of 14th century European armorers. Very low angle illumination of the stone shows a faint impression (Fig. 4) beneath the date that was likened to a rosette, or an "angel with wings." It is so faint it seems subjective; at least two persons "saw" it that way.

The reverse side of the stone shows several long, more or less parallel grooves near the upper end. They are reminiscent of plow marks often seen on large aboriginal artifacts from southern New England.

Apparently, portions of the right side of the stone had been broken off since it was carved, but without any real loss to the inscription, save the "x" in "Rex".

The hill on which the Bresson Stone was found terminates about 75 feet higher in a small field. In heavy underbrush near the outer edge of this field, was a low, rounded, fairly smooth mound about 20 feet in diameter and 3 feet high. Investigation disclosed a recent rodent hole on the northwest side of the mound, and probing in this burrow suggested quite a bit of space beneath the mound. Further, a number of weathered stone slabs from the mound visible in the walls of the rodent burrow, showed a faint layered orientation, with many slabs overlapping. They hinted at a rough coursed stone architecture beneath the sod of the mound. Was this some kind of man-made tumulus? The thought was intriguing, indeed.

Accordingly, on November 17, 1963, a small party under my direction investigated this mound. The

prime thing to establish was whether it was indeed artificial. The brush was cleared, and I had a trench run into the mound, starting well out from its base (Fig. 5). This was to assure us that we would pick up any burrow ditch *in profile* which might have once surrounded the mound and figured in its construction. This exploratory trench was 2 feet wide and averaged about 18" deep. It was carried directly into the heart of the mound, and a lateral offset was then run to the west to include the rodent burrow area. This exploration established beyond doubt that the mound was a natural formation and not the work of man.

Interestingly, I resolved several aspects of the mound's intriguing appearance. For one thing, the space detected by the probe in the burrow was simply the den of the rodent and nothing more. Dried grass and small bones marked it for what it was.

Secondly, this trench suggested the origin of the layered stones. A ledge of schistose, fissile rock rises to the surface just beneath this mound. Cyclic weathering and — notably — frost action over many years was causing the ledge to break up along natural lines of separation, i.e., as slabs or shingles. Frost heaving

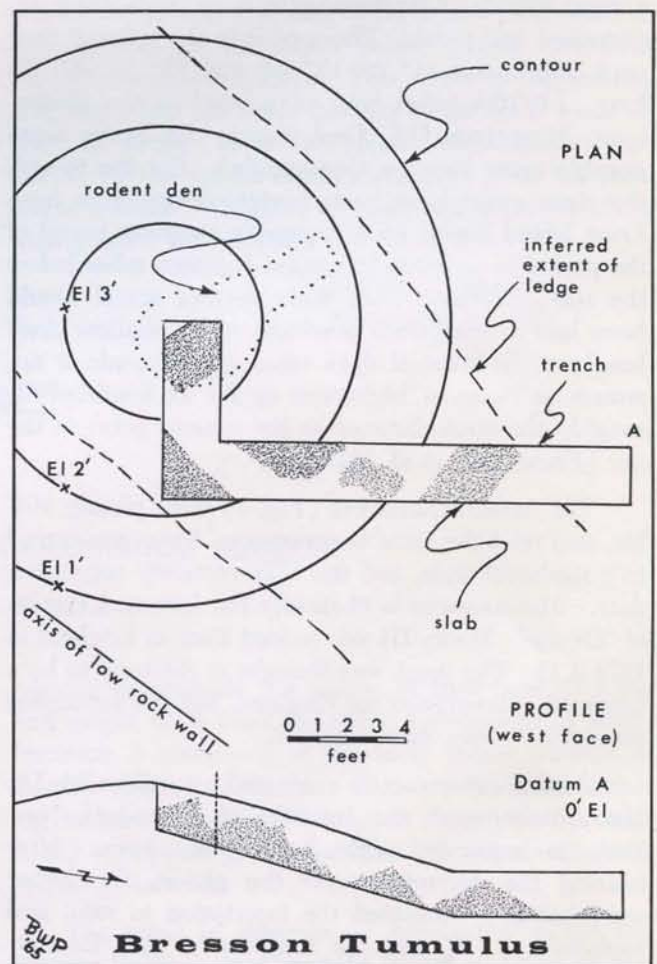


Fig. 5.



and other geological dynamics caused the slabs to migrate slowly out, and in some cases, up from the ledge. These spalls in time assumed a layered, shingled orientation beneath the dirt of the mound, and suggested ancient, deliberate placement. The mound therefore, was wholly negative. The rounded profile is probably incidental to horticultural activities which formerly obtained in the field.

A test pit was put down at the spot where the Bresson Stone had lain. Carried down 4 feet to sterile subsoil, it revealed no evidences of prior disturbance, shaft outlines, charcoal grains, or other anomalies and proved, as had the mound excavation, to be wholly negative. No further phenomena warranting field investigation were noted at the time, and this phase of the project was terminated.

In the course of investigation, attention was directed toward the residents of the area. It is here, I feel, that the most probable explanation for the stone's occurrence lies. It so happens that some years ago, a man named Olivier lived in the old farmstead on whose property the stone was found. This Olivier was surrounded by mystery. It was rumored he was of French aristocratic sympathies and origin, and well-educated, but chose to live in this out-of-the-way spot as a simple truck-farmer.

Some attempt was made to check on his background. One or two of the original group who claimed interest in historical research, volunteered to see what they could find. Unfortunately, no thorough investigation was carried through, and certain diaries and papers said to have been Olivier's never materialized. However, a rather interesting, if damning, profile did emerge via hearsay. Olivier had been a linguist, a nephew of a prominent 19th century medievalist, was globally traveled in his younger years, and was known hereabouts as a craftsman and adept with his hands. He entertained unusual views on many subjects, and is said to have been regarded by his neighbors as rather eccentric.

This evidence is circumstantial, to say the least.

To me, however, it suggests quite strongly that Olivier certainly had the capacity for creation of such a stone: linguistics, knowledge of medieval history, and mechanical skill. This does not prove in the sense required in law or science, that he did it. But it definitely shifts the burden-of-proof for the genuineness of the stone to the shoulders of any who advance this view. The presence of such an individual on the scene enormously complicates the matter. It argues, does it not, for the Bresson Stone being a fake of recent origin? Taken together with the negative field demonstrations for the tumulus, there is no really legitimate grounds for entertaining this as a pre-Columbian manifestation. This paper seeks to inhibit unbridled speculation on the matter — rather premature accounts released to the press by Boland appeared in the *New York Herald Tribune*, November 10, 1963 and elsewhere — or any attempt to cite this stone in support for pre-Columbian voyages unless additional data relative to the find are developed.

One further point: since there is no evidence that the creator of the stone ever attempted to publicly capitalize on it (Olivier is deceased some years), it cannot be properly termed a hoax or deliberate fraud. A charitable view is that it was made by Olivier for his own ends and that its "meaning" was strictly a personal thing to him. He is said to have maintained a cultivated grape arbor in the field near the tumulus — and perhaps the Bresson Stone, found nearby, once graced this area in some fashion he privately fancied.

Norwalk, Conn.  
February, 1965

#### REFERENCES AND NOTES

- PEASE, J. C. AND J. M. NILES  
1819 A Gazetteer of the States of Connecticut and Rhode Island. Hartford.
- POWELL, BERNARD W.  
1964 *American Antiquity*. Vol. 29, No. 4, April, pp. 540. Salt Lake City.
- WILLARD, LAWRENCE F.  
1958 *Yankee*. April, pp. 60 f. Dublin, N: H.





RICHARD Q. BOURN, JR.

A majority of projectile points of several different types, which I have found or examined from coastal Connecticut sites, were apparently made from glacial quartz or quartzite pebbles. The sites referred to are located in Guilford, and along Oyster River in Old Saybrook, including locations at Giant Neck, East Lyme, and Hammonasset Beach in Clinton. Selected flakes struck from such pebbles (Fig. 6) would have been reworked into the various types of points ascribed to several culture groups. This kind of point manufacture is described more in detail by one authority: "Before a pebble core will yield flakes of the required shape, it may have to be prepared, and in the course of the preliminary work a number of waste flakes are produced. The cores will yield flakes until too small, when they are discarded as waste." (Oakely, 1961, p. 23, *Man the Tool-Maker*, pub. British Museum of Natural History, London.)

Pebble-made projectile points usually have thick, unworked bases, often displaying the rounded outer surface of the pebble core. However, many aboriginal workmen, using pebble cores, succeeded in skillfully reworking their points so as to completely remove the outer pebble surface, or the unfinished condition of the base.

As a result of recovered evidence from coastal Connecticut sites, as noted above, it is known that certain specimens of the following point types, as classified and named in New York State by Ritchie, were pebble-made. [The point names appearing in parentheses, following those of Ritchie, represent similar types from New England, as illustrated and described in the Massachusetts Archaeological Society Bulletin, *Classification of Stone Implements of the Northeast*, Vol. 25, No. 1—Ed.]

Lamoka (Small Stem)  
Vosburg (Eared #4)  
Brewerton Side-notched (Side-notched #5)  
Normanskill (Side-notched #5)  
Genesee (Corner-removed #7)  
Snook Kill (Corner-removed #5)  
Poplar Island (Corner-removed #8)  
Bare Island (Corner-removed #3)  
Rossville (Diamond)  
Orient Fishtail (Side-notched #6)  
Susquehanna Broad Blade (Side-notched #1)  
Levanna (Large Triangular)

Certain problems in classification are often encountered. For example, many coastal sites yield Small Stem points, less than 1½" in length, which are

narrow, pebble-made, and are sometimes side-notched. These seem to be closely related to Ritchie's Lamoka points of west-central New York. On the other hand, similar Small Stem points were uncovered at one site, associated with the remains of a stone bowl, probably of the Late Archaic industrial age of New England. At another site, Small Stem (Lamoka-like) points were found associated with pebble-made Corner-removed #8 points of the Early Archaic. [It is unusual to have typical Small Stem points (less than 1½" in length) appearing in the Early Archaic horizon, unless they are intrusive. Therefore, in this case it seems probable they may have been more than 1½" in length, making them Corner-removed #3 points—Ed.]



Fig. 6. QUARTZ PEBBLE CORES, Coastal Connecticut Sites

Typologically, from the evidence of these two sites, it would seem that Small Stem points in New England had their origin in the Archaic period, and, when more than 1½" in length, are Corner-removed #3 points, which equate with Ritchie's Bare Island points. Hence, it is probable that many narrow stem points of New England thought by some to belong to the Lamoka culture of a pre-Archaic period, are no more related to the Lamoka complex than are Large Triangular points of the Ceramic period of later days.

Pebble-made points of coastal Connecticut do not, in my opinion, belong to a separate point-making complex apart from those cultures responsible for manufacture and use of points made from stone materials other than pebbles. It seems to me that the basic reason for the frequent use of pebbles by some coastal aborigines was a result of the abundance of pebbles that lay within their ready reach and the scarcity of other better stone materials, rather than from preference.

Lexington, Mass. — March 1965



In August, 1965, we lost a valuable member, who had contributed a great deal to the upbuilding of this Society. Laurence K. Gahan of the Elmer W. Ekblaw Chapter was a Charter Member of the Society, and later served on the board of Trustees. From the first, he exhibited a keen interest in the Society's objectives for archaeological research. Of especial note was his tireless study of Algonkian linguistics, which provided him with valuable information concerning the Indian language. He was a student of historic tribal occupations of the Massachusetts area, and possessed much information about the aboriginal settlers of New England. On several occasions, he put into writing the results of his investigations concerning Indian words and phrases—interspersed with amusing references to intriguing native expressions—which were published in the Society Bulletin. His persistent research concerning the aborigines of this region contributed much toward his understanding of Indian words, which gave him an intelligent grasp of native linguistics and tribal conditions of colonial days.

Through the years he was continually searching for aboriginal remains, and before his death had accumulated a sizable collection of artifacts, most of which are now on display in the Bronson Museum, generously donated for the advancement of the museum. A large part of them came from the Sudbury River region, and from Holliston, where he was one of only a



few to excavate the stone bowl quarry of that area. Later, he participated with the Ekblaw Chapter in their notable excavation of the Horne Hill quarry in Millbury, which has increased our knowledge of the Stone Bowl industry of aboriginal days.



## CACHE OF ENGRAVED PEBBLES FROM NEW BRUNSWICK

WILLIAM S. FOWLER

This report is concerned with what appears to be an unusual recovery of engraved pebbles. They were brought to our attention by a Society member, J. D. Thomas, of Calais, Maine, who kindly donated the artifacts to the Bronson Museum. He felt that in this way a more thorough investigation could be made of the various incised designs appearing on the pebbles, toward a possible interpretation of their meaning.

Mr. Thomas has furnished information concerning the source of the pebbles, which is significant, if for no other reason, than that it places their origin in the Ceramic Age of the Northeast. It seems that in about 1959 a shellheap coastal site was dug in New Bruns-

wick, Canada. It was located at a place called Holt's Point, where a controlled excavation uncovered the remains of an occupation by shellfish-eating aborigines. As it is known that shellfish were not eaten in the Northeast until the coming of the Ceramic era, artifact recoveries from the midden would obviously be confined to that last period of occupation. Whatever other artifacts were recovered is not known, but the incised pebbles, alone, because of the intricate designs cut on their surfaces, is sufficient reason that the study made of them should be reviewed in this paper.

The 8 engraved pebbles were found at the site lying in a restricted area of about a square foot in size,



and therefore are presumed to represent a cache. If so, then similarity between some of the designs might be taken to mean that these stones were for a ceremonial use, or for some other important function. The cache lay buried in the shell accumulation about 4 to 6 inches below 6 inches of topsoil that covered the midden. Clearly then, as stated above, they belong to the Ceramic Age of shellfish eaters.

It should be emphasized here that this is no ordinary discovery. Incised designs on stones, as movable pictographs, are of rare occurrence in the Northeast and should not be passed over lightly as inconsequential. On the contrary, it seems important to expose any reasonable idea about these pebble engravings that might lead to their interpretation. In an effort toward this end, it seemed desirable to begin with to try to make the incisions more pronounced, as they were scarcely discernible in their original scratched condition without the use of a magnifying glass. Fortunately, Robert Ashley, a professional and accomplished photographer, came to the rescue. With extreme care in securing the proper lighting, he has made remarkably clear enlargements of the pebbles, which are herein reproduced (Fig. 7). Superficial marks on the reverse face of exhibit #8 seem unimportant compared with those on the face photographed and have not

been included. The remaining pebbles have but one face incised as illustrated. The scale in inches noted at bottom of the frame represents the original size after a required reduction of Ashley's enlargements by the printer was made to insure a necessary refinement of incised markings.

At first glance, it is quite apparent that exhibits #1, 5 and 6 are either fragments of more complete pebble engravings, or are so elemental in their present state, as to make them unusable for discovery of their meaning if any. Therefore, they may be discarded, leaving the remaining 5 pebbles as the only ones with completed designs worth considering. Upon a more careful scrutiny, it will be noticed that of these 5 pebbles, exhibit #8 alone seems to have a distinctly different motif, while the other 4 have motifs with much in common. Therefore, it seems desirable to first consider these 4 pebble engravings and find out, if possible, what constitutes their motif similarity.

Exhibits #2, 3 and 4 have been intentionally positioned, so that in each case the design appears with important cross bars showing at the bottom. While exhibit #7 does not show the same cross bars, it does have a base with a double linear crossing—possibly with a similar meaning to that of the cross bars. The remainder of this pebble engraving is so indistinct as

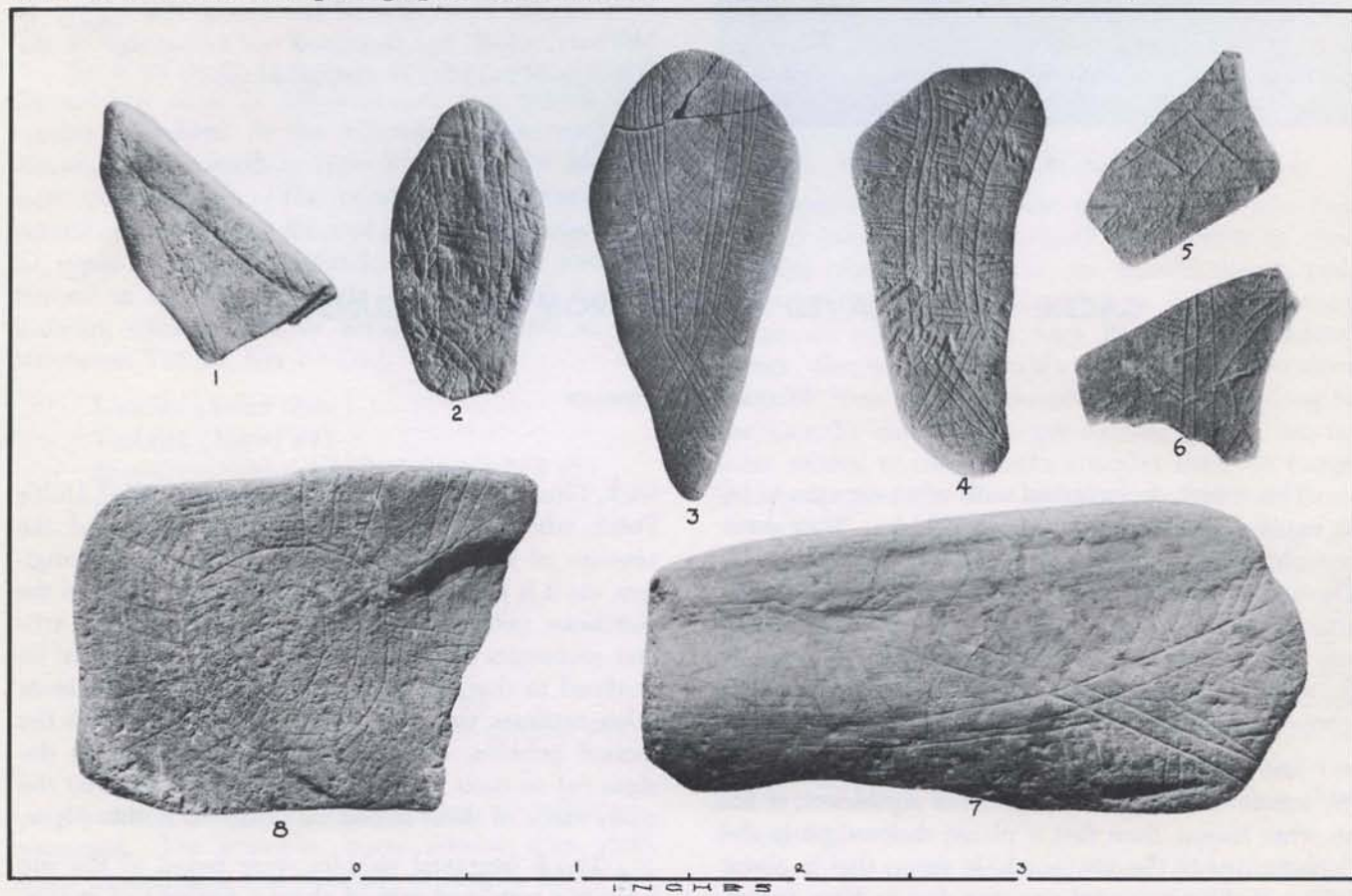


Fig. 7. CACHE OF ENGRAVED PEBBLES. From the Holt's Point Shellheap, New Brunswick, Canada. (Photos by Robert Ashley).



## REDETERMINATION OF THE HALF-LIFE OF CARBON 14

to defy further analysis. Confining the remaining investigation to the other 3 pebbles, as first mentioned, it is clear that each has a motif in which the linears of the cross bars extend up the full length of the pebble and bleed off at the upper end. Exhibits #3 and 4 show marked similarity in many ways, as may be readily seen, while #2 is not so clearly defined. However, all three have either three or four line linears with sets of linear markings at right angles, bleeding off the longitudinal edges of the pebbles. Because of such close attention to a set design motif, there is little doubt that these movable pictographs had a similar meaning and purpose in the customs of their day. Whether for ceremonial use or not, it would seem that no engraver would have incised these somewhat intricate designs with such close adherence to a set motif just for the fun of it. Rather, it appears certain that this particular motif had some definite meaning in Ceramic times, which more than likely was utilized by the medicine man in performing certain of his official rites.

Exhibit #8, the remaining pebble appears to have a design with a definite motif; goes perhaps a step further in suggesting, at least, a more positive appli-

cation. Here, it will be noted, are described three concentric circles with expanding circumferences. Extending from the outer circle and bleeding off all four edges of the pebble are more or less equi-spaced single lines. When taken together, these incisions seem to resemble the sun with expanding rays shooting off all about it. This interpretation may not be too far removed from the truth, as aborigines the world over have invariably resorted to some form of sun worship, as important to their spiritual beliefs. Here again may be a significant engraved marker used by the medicine man or spiritual priest in invoking aid from the sun god or spirit in some ceremonial rite.

While these suggestions may not satisfy everyone, they are an attempt to explain the meaning of the Holt's Point engraved pebbles. Other interpretations are possible, of course, but whatever they may be, there is every reason to believe that these stones had a definite use—were not casual picture engravings for the amusement of some artistic enthusiast.

Bronson Museum  
June 17, 1965



## REDETERMINATION OF THE HALF-LIFE OF CARBON 14

WILLIAM B. BRIERLY

The value of 5568 years for the half-life of carbon 14 has been in use for a number of years.<sup>1</sup> This figure, which was somewhat arbitrarily chosen for dating archaeological specimens from the wide range of measured values extending from 4700 to 7200 years, represents a weighted average of three selected values determined by gas counting and by mass spectrometric analysis.

A more accurate value of 5760 years with an overall probable error of one per cent for the half-life of carbon 14 was recently obtained by W. B. Mann and W. F. Marlow of the Radioactivity Laboratory of the Bureau of Standards<sup>2</sup> using quantitatively diluted high-specific activity carbon dioxide for counting in length-compensated internal gas counters in the Geiger and proportional regions. E. E. Hughes, R. M. Reese, and V. H. Dibler made the mass spectrometric analyses of parts of the undiluted gas sample to deter-

mine the isotropic abundance of carbon 14 (which was found to be approximately 44 atoms per cent). H. W. Wilson of the United Kingdom Atomic Energy Authority also collaborated in intercomparative measurements of the isotropic abundance.

The date established by the National Bureau of Standards in 1953 was  $5900 \pm 250$  years<sup>3</sup> which closely approximates the new value obtained in 1960 by W. B. Mann and W. F. Marlow.

Millbury, Massachusetts  
June 7, 1961

1. Radiocarbon dating, Willard F. Libby, p. 34, *Chicago Press*, 1955.
2. Redetermination on the Half-Life of Carbon 14, *Technical News Bulletin, National Bureau of Standards*, Vol. 45, No. 2, p. 21, February 1961.
3. Disintegration rate of Carbon 14, R. S. Caswell, J. M. Brabant, & A. Schwebel, *Journal of Research, National Bureau of Standards*, Vol. 53, No. 27, 1954.